Maine College Transitions Project
College Transitions Syllabus
August 2005

Title: Algebra Skills for College
Draft # 2 Course Syllabus -
The intent of this draft syllabus is to provide Adult Education program administrators and instructors a suggested core and title for the provision of a transition math class. It is expected that this class will match the needs of adult learners to prepare for and develop skills for placement testing and success in college level math courses, and to avoid the repetition of a developmental algebra course at the post secondary level.

Suggested contact hours for Syllabus: 90 – 120

Note: This syllabus is intended to provide the basics of algebra skills required for success in a degree level post-secondary algebra program. Skill level should be determined prior to entry. The suggested syllabus should be divided into parts 1 and 2 if provided on a semester basis. The purpose of the course is mastery of skills and appropriate placement scores.

Course Description:

The Transition Curriculum is designed for high school graduates or GED recipients who intend to or are applying to post secondary institutions.
This course covers the standard topics of basic algebra: real numbers and algebraic expressions, using formulas, solving linear equations and inequalities, Cartesian coordinates, graphs of linear equations, direct and inverse variation, operations with polynomials, factoring of polynomials, solving quadratic equations, and simplifying rational and radical expressions.

Scientific calculators should be introduced and utilized in this course.

Course Objectives: Upon successful completion of the course, the student will be able to

- Review integers, rational numbers and order of operations
- Use the properties of real numbers to simplify algebraic expressions
- Solve linear equations, inequalities and absolute values
- Evaluate and solve formulas
- Graph linear equations and inequalities.
- Find slopes, intercepts and the equation of a line
- Use rules of exponents including negative exponents and scientific notation
- Perform operations on polynomials
- Factor polynomials
- Solve quadratic equations
- Perform operations on rational expressions
- Solve direct and inverse variation problems
- Perform operations on radical expressions
- Solve systems of equations
- Evaluate expressions involving function notation

All skills listed should be presented and applied in real life situations and word problems when possible.

Suggested Text and Materials:

Cord Applied Mathematics, Algebra Series (ISBN # 1-55502-918-3) $$ and/or
Cord Algebra 1, Second Edition (ISBN # 1-57837-326-3) $ Cord Communications,
www.cordcommunications.com

Basic College Math, K. Elayn Martin-Gay, $$$ Prentice Hall, New Jersey. (ISBN: 0-13-067699-3)

[Future reviews of this syllabus will include additional and optional texts based on input from field practitioners.]

Recommended Curriculum:

The York County Adult Education Math Curriculum Framework is available. Completion of Tier II and III is recommended. Course sequence by semester is also available in Pam Meader's suggested Algebra Part A and Part B.

Placement Testing:

Based on current admissions procedures at the Maine Community College System, various cut scores are required at individual campuses. Placement into an Algebra Skills for College course or program of study is recommended for students scoring less than 75 on the Elementary Algebra section of the Accuplacer examination or scoring less than 510 in math in a recent (within one year) GED test. (Students scoring 520 or above on the GED math test should immediately take the Accuplacer college placement exam. These scores closely align with a 11.4 GE or 603 scale score on the TABE A.

Because of the need to prepare for and score well on placement examinations, test taking skills should be incorporated into instruction.

Sources:

Accuplacer Guide
SMCC Math Syllabus, MAT 050
USM Math Content, MAT 050
Standards for Success, Association of American Universities

Initial Draft completed August 5, 2005, by the Transitions Math Curriculum Committee:

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